

REMARKS

Claims 1-8 and 15-26 are pending in the application. Claims 1-8 and 15-25 are rejected. Claims 2, 3 and 5 are objected to.

Claim 1 has been amended by incorporating the limitations of claim 4 and canceling the substitution language.

Claims 1 and 22 have been amended to restrict the acrylamide monomer unit to mono- or di-alkyl acrylamides. Support for this amendment is found at p. 2, lines 21-29 of the present description. Claims 1 and 22 have been further amended to include the limitation of claim 16, now canceled.

Claim 2 has been amended for clarity by referring to the amide monomer as an acrylamide monomer, consistent with claim 1.

Claim 5 has been amended for clarity by changing the phrase "further comprising" to "selected from the group consisting of" as suggested by the Examiner.

Claims 1 and 26 have been amended to correct for antecedent bases.

Claim 17 has been amended to correct for dependency.

Claims 8 and 16 have been canceled.

Accordingly, no new matter is submitted with this Reply.

Reply to the Objection of Claims 2, 3 and 5

The Examiner has rejected claims 2, 3, and 5 due to various informalities. With respect to claim 2 the Examiner states that the term "amide" should be deleted. Claim 2 has been amended to instead refer to the amide monomer as an acrylamide, which is consistent with Claim 1. The Examiner states that "further comprising" in claim 5 should be replaced with "are selected from the group consisting of". Claim 5 has been amended as noted by the Examiner. It is believed that these amendments overcome the Examiner's objection to claims 2, 3 and 5. Withdrawal, therefore, of the objection to the claims is respectfully requested.

Reply to the Rejection of Claims 1-8 and 15-25 under 35 U.S.C. § 112, 1st paragraph

The Examiner has rejected claims 1-8 and 15-25 as failing to comply with the written description requirement. Specifically, the Examiner states that the specification provides support for specific acrylamide monomers, but does not provided support for any “substituted and/or unsubstituted acrylamide”.

Claim 1 has been amended to define the amide as mono- or di- substituted amides. Support for this amendment is found at p. 2, lines 24-29 of the Description. Accordingly, no new matter is introduced.

It is believed that these remarks overcome the Examiner’s rejection of claims 1-8 and 15-25 as failing to comply with the written description requirement. Withdrawal, therefore, of the rejection of claims 1-8 and 15-25 under 35 U.S.C. § 112, first paragraph is respectfully requested.

Reply to the Rejection of Claims 1-8 and 15-25 under 35 U.S.C. § 112, 2nd paragraph

The Examiner has rejected claims 1 and 26 as being indefinite. Specifically, the Examiner states that there is insufficient antecedent basis for the limitation “the side chains” in those claims.

Claims 1 and 26 have been amended to correct the antecedent basis of “the side chains” in those claims. It is believed that these amendments overcome the Examiner’s rejection of claims 1 and 26 as being indefinite. Withdrawal, therefore, of the rejection of claims 1 and 26 under 35 U.S.C. § 112, second paragraph is respectfully requested.

Reply to the Rejection of Claims 1-8, 15-18 and 20-25 under 35 U.S.C. § 102(b)/103(a)

The Examiner has rejected Claims 1-8, 15-18 and 20-25 as being anticipated by, or, alternatively, rendered obvious in view of U.S. Patent No. 5,843,192 to Kirk *et al.* (“Kirk”). For the following reasons, Applicants respectfully traverse the Examiner’s rejection of claims 1-8, 15-18 and 20-25 as being anticipated by Kirk.

As previously indicated, Kirk teaches a composition useful in a washing process containing at least one vinyl amide polymer. The vinyl amide polymer is comprised of 5-100 weight % of at least one vinyl amide monomer, and 0-95 weight % of one or more vinyl ester monomers, and at least one additive (Abstract; col. 2, lines 28-49). The at least one vinyl amide polymer in the composition of Kirk is required to be formed, as polymerized units, from at least

one vinyl amide monomer such as N-vinyl formamide, N-vinyl acetamide, N-vinyl-N-methyl acetamide or combinations thereof (col. 3, lines 12-40).

The vinyl amide polymer can also be formed so that it contains less than three (3) weight percent (most preferably 0 to 0.5 weight percent) of one or more optional acrylamide monomers such as N,N-dimethyl acrylamide. Only polymers formed from vinyl amide monomers (N-vinyl formamide (NVF) or N-vinyl-N-methyl acetamide (NVA)) and vinyl ester monomers (vinyl acetate) are exemplified (see vinyl amide polymer Examples 1-7, Tables 1-8 of Kirk).

Independent claims 1 and 22 (and therefore their dependent claims) have been amended to limit the acrylamide monomer used in forming the polymer to at least 5 mole percent of mono- or di-alkyl acrylamides, which is greater than the less than 3 weight percent allowed in Kirk (col. 4, lines 39-55). Further, in contrast to Kirk, mono- or di-alkyl acrylamide polymers of the present invention are attached to the polymer backbone by a carbonyl group (C=O) and not by nitrogen linkages as is the case with polyvinyl amide polymers as taught by Kirk. Therefore, for the purpose of a 102 rejection, Kirk does not teach with specificity each and every element of the claimed invention.

From an obviousness standpoint, the less than 3 weight percent of acrylamide monomers used to form the vinyl amide polymer of Kirk is not equivalent to the 5 to 100 mole percent of acrylamide monomer units as claimed in claim 1 of the present invention. Further, Kirk teaches away from the use of acrylamides in that it states that only 0 to 0.5 weight % of the acrylamide monomer is preferred in its polymer, and provides no examples of polymers that include acrylamide monomers. Kirk also provides no motivation for the presently claimed percentage of mono- or di-alkyl acrylamide monomers in that it requires from 5 to 100 weight percent of the vinyl amide monomer. In this respect, Kirk teaches away from polymers formed from at least 5 mol % of one or more acrylamide monomers.

For at least these reasons, Kirk does not provide motivation to one skilled in the art to modify its polymer to achieve the polymer of the presently claimed invention, and therefore cannot be said to render the presently claimed invention unpatentable.

It is believed that these remarks overcome the Examiner's rejection of claims 1-8, 15-18 and 20-25 as being anticipated by Kirk under 35 U.S.C. § 102(b) or, alternatively, rendered

obvious in view of Kirk under 35 U.S.C. § 103(a). Withdrawal of the rejection is respectfully requested.

Reply to the Rejection of Claims 1-6, 8, 15-18 and 20-25 under 35 U.S.C. § 102(b)

The Examiner has rejected Claims 1-6, 8, 15-18 and 20-25 as being anticipated by European Patent Application No. 0 634 486 A1 to Kirk *et al.* ("Kirk 2"). For the following reasons, Applicants respectfully traverse the Examiner's rejection of claims 1-6, 8, 15-18 and 20-25 as being anticipated by Kirk 2.

Kirk 2 is directed towards a process for preventing dye deposition onto fabrics by means of a dye deposition agent. The dye deposition agent includes a thickener, an aryl sulfonic acid condensate, a polycarboxylic dispersant, or an acrylamide-containing polymer (Abstract).

The acrylamide-containing polymer useful in the dye deposition agent of Kirk 2 is "formed from (1) at least one acrylamide or N-substituted acrylamide monomer, and optionally (2) one or more vinyl monomers" (p. 11, lines 21-41). Vinyl monomers include C₁ to C₆ alkyl (meth)acrylate and hydroxyalkyl (meth)acrylate (p. 11, lines 42-47). Preferred are dimethylacrylamide, methyl acrylamide, acrylamide and mixtures thereof as the acrylamide monomer, and non-ionic vinyl monomers such as hydroxyalkyl (meth)acrylate or alkyl (meth)acrylate (p. 12, lines 21-24). Kirk 2 does not indicate the weight or molar ratios of acrylamide and vinyl monomer in the polymer; however, Example 15 illustrates an acrylamide polymer that is 80 wt. % N,N-dimethylacrylamide and 20 wt. % hydroxyethyl methacrylate. No other monomer is taught or suggested for use in the acrylamide copolymer of Kirk 2.

Independent claims 1 and 22 have been amended to indicate that the acrylamide polymer includes an anionic monomer. Kirk 2 does not teach or suggest such polymers, but rather limits its copolymer to acrylamide and non-ionic vinyl monomers. Therefore, as Kirk 2 does not teach or suggest with specificity each and every element of the claimed invention, Kirk 2 cannot be said to anticipate the presently claimed invention.

It is believed that these remarks overcome the Examiner's rejection of claims 1-6, 8, 15-18 and 20-25 as being anticipated by Kirk 2 under 35 U.S.C. § 102(b). Withdrawal, therefore, of the rejection is respectfully requested.

Reply to the Rejection of Claim 7 under 35 U.S.C. § 103(a)

The Examiner has rejected Claim 7 as being unpatentable over Kirk 2. For the following reasons, Applicants respectfully traverse the Examiner's rejection of claim 7 as being unpatentable over Kirk 2.

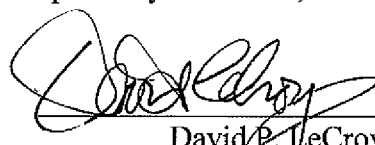
As noted above, independent claims 1 and 22 have been amended to include an anionic monomer in its polymer. Kirk 2 does not teach or suggest this monomer. Therefore, even if one skilled in the art was motivated to add water to the composition (which Applicant is not asserting), Kirk 2 would still be lacking the claimed anionic monomer.

For at least these reasons, Kirk cannot be said to render the presently claimed invention unpatentable. It is believed that these remarks overcome the Examiner's rejection of claim 7 as being rendered obvious in view of Kirk under 35 U.S.C. § 103(a). Withdrawal of the rejection is respectfully requested.

Based on the above amendments and remarks, allowance of the claims is believed to be in order, and such allowance is respectfully requested.

Respectfully submitted,

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